

REMARKS

Claims 13-15 and 17 are pending. By this Amendment, claim 13 and 17 are amended, and claim 16 is canceled without prejudice or disclaimer. Support for amended claim 13 can be found at least at Fig. 6. No new matter is added.

The Examiner is respectfully requested to acknowledge consideration of the references listed in the IDS concurrently filed herewith.

The Office Action rejects claims 13-17 under 35 U.S.C. §112, second paragraph. By this Amendment, Applicants amend claims 13 to obviate the rejection. Accordingly, Applicants request that the rejections under 35 U.S.C. § 112 be withdrawn.

The Office Action rejects claims 13-17 under 35 U.S.C. §102(b) as being anticipated by Hayashi (U.S. Patent Application Publication No. 2003/0035256). The rejection of canceled claim 16 is moot. Applicants respectfully traverse the rejection of the remaining claims.

In particular, Applicants assert that Hayashi does not disclose or suggest that at least surfaces of a second shielding layer corresponding to magnetic domain controlling layers extending along both sides of a magnetoresistive effective film are formed closer to a bottom electrode layer than a surface of the magnetoresistive effective film on which a first gap film is formed, as recited in independent claim 13.

Hayashi discloses that a magnetoresistive effective element (MR element) has MTJ (ferromagnetic tunneling junction) structure (3-7), upper electrode layer 8 formed on the MTJ structure (3-7), longitudinal bias layers 10 along with underlayers 11 formed substantially at the both sides of the MTJ structure (3-7), and upper magnetic shield layer 12 formed on upper electrode layer 8. However, Hayashi's longitudinal bias layers 10 are overlapped with upper electrode layer 8 at both sides of MTJ structure (3-7). Further, Hayashi merely discloses that upper magnetic shield layer 12 is laminated on longitudinal bias layers 10 at the both sides on

MTJ structure (3-7). Therefore, Hayashi fails to teach that surfaces of upper magnetic shield layer 12 corresponding to longitudinal bias layers 10 extending along both sides of MTJ structure (3-7) is formed closer to lower electrode layer 3 than a surface of the MTJ structure (3-7) on which upper electrode layer 8 is formed. See Fig. 3 and paragraph [0049]-[0054] in the specification.

Thus, Applicants assert that Hayashi does not disclose or suggest that at least surfaces of a second shielding layer corresponding to magnetic domain controlling layers extending along both sides of a magnetoresistive effective film are formed closer to a bottom electrode layer than a surface of the magnetoresistive effective film on which a first gap film is formed, as recited in independent claim 13.

In view of the above, independent claim 13 defines patentable subject matter. Claim 14, 15 and 17 depend from independent claim 13, and therefore also define patentable subject matter. Accordingly, Applicants respectfully request that the rejection of claims 13-15 and 17 under 35 U.S.C. §102(b) be withdrawn

In view of the foregoing, Applicants submit that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 13-15 and 17 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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